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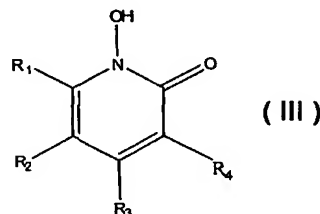
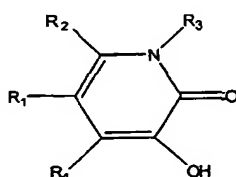
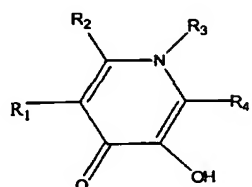
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(54) Title: METHODS OF INHIBITING 4-HYDROXYPHENYLPYRUVATE DIOXYGENASE IN A LIVING SYSTEM



(57) Abstract: The present invention is directed to a method of inhibiting 4-hydroxyphenylpyruvate dioxygenase in a living system by administering to the living system an effective amount of a compound of formulas I or II or III or derivatives thereof as follows: R¹, R², R³, and R⁴ each individually represent a hydrogen, an alkyl, alkenyl, or alkoxy group containing 1 to about 8 carbon atoms, an aryl, aralkyl, or cycloalkyl group containing about 5 to 12 carbon atoms, or a carboalkoxy or carbamyl group containing up to 8 carbon atoms, or a peptide or peptidomimetic moiety containing 10 to about 30 carbon atoms under conditions effective to inhibit 4-hydroxyphenylpyruvate dioxygenase in the living system. These compounds are also useful in carrying out a method of treating a patient and a method of regulating plant growth.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/21178

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A01N 43/40; A61K 31/44, 31/445; C07D 211/72

US CL : 504/255; 514/330, 348; 546/296

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 504/255; 514/330, 348; 546/296

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WALDMEIER et al. Inhibition of Catechol-O-Methyltransferase (COMT) as well as	1, 2
---	Tyrosine and Tryprophan Hydroxylase by the Orally Active Iron Chelator, 1,2-Dimethyl-3-	
A	Hydroxypyridin-4-one (L1, CP20), in Rat Brain In Vivo, Biochemical Pharmacology,	3-6
	March 1993, Vol 45. No. 12, pages 2417-2424.	
A	US 6,118,050 A (STURNER et al) 12 September 2000 (12.09.2000), columns 1-2.	5, 6

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

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"P" document published prior to the international filing date but later than the priority date claimed

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later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"&"

document member of the same patent family

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INTERNATIONAL SEARCH REPORT

PCT/US03/21178

Continuation of B. FIELDS SEARCHED Item 3:

WEST, STN (file medicine)

search terms: tyrosinemia, hypertyrosinemia, tyrosine, deferiprone, dmhp, 4hppd, pyruvate, plant, herbicide